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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,951	02/10/2004	Matthias Riepenhoff	71294	1657
23872	7590	05/16/2005	EXAMINER	
MCGLEW & TUTTLE, PC P.O. BOX 9227 SCARBOROUGH STATION SCARBOROUGH, NY 10510-9227			FUNK, STEPHEN R	
			ART UNIT	PAPER NUMBER
			2854	

DATE MAILED: 05/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/775,951

Applicant(s)

RIEPENHOFF ET AL.

Examiner

Stephen R. Funk

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5-12 and 14-16 is/are allowed.
- 6) ☒ Claim(s) 1,2,4 and 17-20 is/are rejected.
- 7) ☒ Claim(s) 3 and 13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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Claim 13 is objected to because of the following informalities:

In claim 13 line 3 "are includes" is grammatically awkward.

Appropriate correction is required.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over D'Heureuse et al. (US 6,318,264) in view of Nakayama et al. (US 6,391,522).

With respect to claims 1 and 19, D'Heureuse et al. teach providing a photocatalytically and thermally modifiable printing form that can be brought into a hydrophilic state by irradiation with UV light (column 4 lines 35 - 53, column 8 line 66 - column 9 line 12) and into a lipophilic state by heating (column 4 lines 5 - 8, column 8 lines 38 - 44), erasing a printing style by irradiating the entire surface with UV light (column 8 line 66 - column 9 line 12), and feeding water to the surface during the irradiation (column 9 lines 1 - 6). Note the imaging device (4)

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and UV radiation source (14, 16) of D'Heureuse et al. D'Heureuse et al. do not teach the form having an IR absorption component.

Nakayama et al. ('522) teach a top layer (thin layer) having a photocatalytically and thermally modifiable material (column 2 lines 57 - 67, column 4 line 3+) with an underlying IR absorption component (column 3 lines 23 - 31, column 3 line 66 - column 4 line 2, column 5 lines 20 - 24). See also column 7 line 42 - column 8 line 10 and column 30 lines 1 - 10 of Nakayama et al. It would have been obvious to one of ordinary skill in the art to provide the printing form of D'Heureuse et al. with an underlying IR absorption component in view of Nakayama et al. ('522) so as to increase the sensitivity of the material to active light and heat absorption.

With respect to claim 2 D'Heureuse et al. do not teach the specific humidity at the surface during the irradiation. However, it would have been obvious to one of ordinary skill in the art through routine experimentation to arrive at the recited humidity during the irradiation so as to optimize the hydrophilizing of the surface.

With respect to claims 4 and 19 see column 4 lines 49 - 53 and the paragraph bridging columns 8 and 9 of D'Heureuse et al.

With respect to claim 18 note that the IR absorption component of Nakayama et al. is a separate layer.

Claims 1, 2, 4, 17, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over D'Heureuse et al. (US 6,318,264) in view of Nakayama et al. (US 6,420,091). D'Heureuse et al. has been addressed above. D'Heureuse et al. do not teach the form having an IR absorption component mixed with the modifiable material. Nakayama et al. teach a wet offset printing form

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comprising a top layer (3) having a photocatalytically and thermally modifiable material that can be brought into a hydrophilic state by irradiation and a hydrophobic state by heat (column 4 lines 29 - 48) and absorption centers (column 16 lines 59 - 63) that form a part of the top layer for converting radiation to heat (column 4 lines 39 - 48). Note, in particular, column 16 lines 59 - 65 which states that both the absorption centers and modifiable material *particles* are in a solution which is then coated onto the carrier forming the top layer. Accordingly, the absorption centers would be dispersed in the layer and spaced from the top layer surface with some of the modifiable material disposed between the absorption centers and the top layer surface.

It would have been obvious to one of ordinary skill in the art to provide the printing form of D'Heureuse et al. with an IR absorption component in view of Nakayama et al. ('091) so as to increase the sensitivity of the material to active light and heat absorption.

With respect to claims 2, 4, and 19 note the comments above.

With respect to claim 20 Nakayama et al. see column 21 lines 8 - 15 and Example 12 of Nakayama et al. It would have been obvious to one of ordinary skill in the art to provide the printing form of D'Heureuse et al. with an insulating layer in view of in view of Nakayama et al. ('091) so as to prevent heat from being dissipated through the carrier layer.

Claims 5 - 12 and 14 - 16 are allowed.

Claim 13 would be allowable if rewritten or amended to overcome the objection(s) set forth in this Office action.

Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection. Note that D'Heureuse et al. teach in column 4 lines 5 - 8 that the image regions are brought into a lipophilic state by the IR radiation. It is also well known in the art that photocatalytic materials, in particular titanium dioxide, turn hydrophilic in response to UV light and hydrophobic in response to heat, i.e. IR radiation. Applicant's arguments with respect to claims 3 and 5 have been fully considered and are persuasive.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

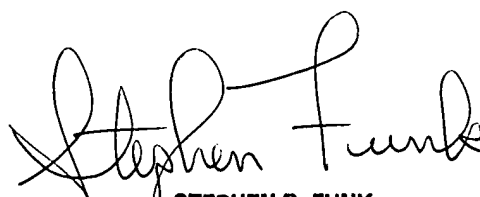
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen R. Funk whose telephone number is (571) 272-2164.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Hirshfeld, can be reached at (571) 272-2168.

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The fax phone number for ALL official papers is (703) 872-9306. Upon consulting with the examiner *unofficial* papers only may be faxed directly to the examiner at (571) 273-2164.

SRF  
May 10, 2005



STEPHEN R. FUNK  
PRIMARY EXAMINER